

ABSTRACT

The invention is intended to provide a mass flow control device incorporating a verification tank, in which the mass flow testing operations are conducted by the device itself. A mass flow control device comprises control means 18 for controlling a flow control valve mechanism based on an externally input flow set signal and a flow signal. The mass flow control device is equipped with a mass flow detector means 8 and a flow control valve mechanism 10 both of which are set in a channel 6 through which a fluid flows., The mass flow detector means 8 detects the mass flow of the fluid that flows through the channel and outputs the flow signal. The flow control valve mechanism 10 controls the mass flow by altering the valve aperture by means of valve drive signals. The mass flow control device is also equipped with a verification valve 42, a verification tank 44 and pressure detector means 46 in the channel. The verification valve 42 opens and closes the channel. The verification tank 44 has a certain volume. The pressure detector means 46 detects the pressure of the fluid and outputs pressure detection signals. The mass flow control device is also equipped with verification control means 48 which controls the detection valve and detection tank and pressure detector means to carry out the mass flow testing operations.